

WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTERS  
PATENT OF THE UNITED STATES IS:

1. An automated chemical synthesizer comprising:  
a plurality of reaction vessels in which synthetic  
5 reactions are to be carried out according to a synthesizing  
process; and

an execution time calculator configured to calculate  
presumed execution time to carry out a predetermined scope of  
the synthesizing process before said predetermined scope of  
10 the synthesizing process is actually carried out.

2. An automated chemical synthesizer according to Claim  
1, wherein said predetermined scope is an entirety of the  
synthesizing process.

3. An automated chemical synthesizer according to Claim  
15 1, wherein said predetermined scope is a part of the  
synthesizing process.

4. An automated chemical synthesizer according to Claim  
1, wherein the execution time calculator is configured to  
calculate the presumed execution time before the synthesizing  
20 process starts.

5. An automated chemical synthesizer according to Claim  
1, wherein the execution time calculator is configured to  
calculate the presumed execution time while the synthesizing  
process is carried out.

25 6. An automated chemical synthesizer according to Claim  
1, wherein the execution time calculator is configured to

calculate the presumed execution time before and while the synthesizing process is carried out.

7. An automated chemical synthesizer according to Claim 1, further comprising:

5        an output device configured to output the presumed execution time calculated by the execution time calculator.

8. An automated chemical synthesizer according to Claim 1, wherein the synthesizing process includes a plurality of processes and wherein the execution time calculator is  
10        configured to calculate the execution time by adding a partial execution time to carry out each of the plurality of processes.

9. An automated chemical synthesizer according to Claim 8, further comprising:

15        at least one liquid dispenser configured to dispense liquid chemicals to said plurality of reaction vessels during a dispensing process of the plurality of processes, the execution time calculator being configured to calculate the partial execution time to carry out the dispensing process by  
20        adding times during which the liquid dispenser draws the liquid chemicals, moves, and injects the liquid chemicals from the liquid dispenser.

10. An automated chemical synthesizer according to Claim 9, further comprising:

25        a storage configured to memorize positions at which the liquid chemicals are positioned, kinds of liquid chemicals, a

drawing speed at which the liquid dispenser draws the liquid chemicals, and an injecting speed at which the liquid dispenser injects the liquid chemicals.

5 11. An automated chemical synthesizer according to Claim 9, wherein said at least one liquid dispenser is configured to dispense the solvents and reagents to said plural reaction vessels.

12. An automated chemical synthesizer according to Claim 11, wherein said at least one liquid dispenser comprises:

10 a first liquid dispenser configured to dispense the reagents to said plural reaction vessels; and

a second liquid dispenser configured to dispense the solvents to said plural reaction vessels.

15 13. An automated chemical synthesizer according to Claim 8, wherein the plurality of processes include a reaction process, the execution time calculator being configured to calculate the partial execution time to carry out the reaction process based on a predetermined reaction time.

20 14. An automated chemical synthesizer according to Claim 13, further comprising:

a temperature controlling mechanism configured to control temperature of each of the plurality of reaction vessels to be a target temperature; and

25 a storage configured to memorize information with respect to a temperature increasing time during which the temperature increases to the target temperature and a temperature

decreasing time during which the temperature decreases to a room temperature.

15. An automated chemical synthesizer according to Claim 14, wherein the storage is configured to memorize the relationship between the target temperature and the temperature increasing and decreasing time.

16. An automated chemical synthesizer according to Claim 8, wherein the plurality of processes include a stirring process, the execution time calculator being configured to calculate the partial execution time to carry out the stirring process based on a predetermined stirring time.

17. An automated chemical synthesizer comprising:

a plurality of reaction vessels in which synthetic reactions are to be carried out according to a synthesizing process; and

an execution time calculating means for calculating presumed execution time to carry out a predetermined scope of the synthesizing process before said predetermined scope of the synthesizing process is actually carried out.